

COVID-19: Potential Impacts on the Electric Power Sector

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The COVID-19 pandemic could impact the electric power sector directly (e.g., illness in the workforce) or indirectly (e.g., reduced economic activity caused by responses by governments, businesses, and the public at large). In the near-term (i.e., the next few weeks), most impacts will likely be caused by reduced economic activity. Long-term impacts are highly uncertain and likely depend on the pandemic's ultimate toll on U.S. public health and the economy.

Potential impacts include reduced electricity demand, electric reliability risks, reduced utility bill payments, and delayed or reduced industry investment activity. Congress could choose to address these issues, or related issues, in future bills addressing the pandemic, in annual appropriations (which are currently being discussed for FY2021), in supplemental appropriations bills, or in other legislation.

Reduced Electricity Demand

Electricity demand is determined mainly by weather patterns and economic activity. Economic activity in recent weeks has declined across the country, as governments take actions to slow the spread of COVID-19. These actions have forced many businesses to close or curtail operations. [Preliminary reports suggest the reduction in business activity may be reducing electricity demand up to 18%](#), though not all regions are seeing reductions. The relative impacts of closures and mild weather are yet to be determined. Analysis of changes in electricity usage in Italy and Spain, after those countries closed many businesses in response to COVID-19, suggest that [sustained reductions of 10%-20% are likely for as long as closures are in effect](#).

Reduced electricity demand tends to lower wholesale electricity prices in the near term, as is also the case for other energy commodities like gasoline. Consumers may not see lower retail electricity prices, though, because of the timeline of electricity rate regulation by states.

Reduced electricity demand could persist for months or longer. If demand and prices remain low for extended periods of time, some power plants may become unprofitable. Several parts of the country have seen power plant retirements in recent years as changing conditions in the sector affect profitability.

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COVID-19 could potentially accelerate this trend. Additionally, utilities may delay or cancel construction of new power plants.

Electric Reliability

Electric grid operators are [well prepared for direct impacts of COVID-19](#), according to the North American Electric Reliability Corporation (NERC). NERC oversees electric reliability in the contiguous United States and adjacent regions of Canada and Mexico. Preparations include having a written pandemic response plan in place, and developing plans for potential supply chain disruptions. On March 23, the [grid operator for the state of New York began housing some essential workers onsite](#) to protect them from potential exposure, in an effort to ensure continued supply of electricity in the state.

[Federal guidance issued March 19](#) identifies several kinds of electric power sector jobs as “essential critical infrastructure workers.” Many states that have closed non-essential businesses have used this federal guidance to determine which businesses should remain open. Essential electric power sector jobs identified by the March 19 guidance include workers who maintain and operate power plants, workers who maintain and operate transmission and distribution systems, and workers who maintain safety at nuclear power plants.

One aspect of reliability gaining special consideration in the industry is the [refueling of nuclear power plants](#). Refueling is a complicated process, often scheduled years in advance and requiring hundreds of specialized workers to travel to geographically dispersed power plants.

Approximately [one-third of the nation’s nuclear fleet is scheduled for refueling this spring](#).

Industry officials and federal regulators are working to plan for potential adjustments to refueling schedules caused by COVID-19 impacts.

Reduced Bill Payments

Electricity customers may be unable to pay their monthly electricity bills as public health closures lead to reduced revenue for businesses and reduced income for individuals. Under normal conditions, utilities and their state or local regulators put in place procedures to stop electric service to non-paying customers (these procedures are commonly known as shutoffs). [Many utilities have voluntarily suspended shutoffs](#) and many regulators have banned shutoffs as part of their COVID-19 response. It is unclear how any resulting lost utility revenue may be addressed when normal conditions return. Revenue shortfalls are often recovered by higher electricity rates in future years, though regulators could be reluctant to increase rates if economic activity remains low.

Congress did not directly address shutoffs or utility revenues in recently enacted legislation; however, the Coronavirus Aid, Relief, and Economic Security Act, or the CARES Act (P.L. 116-136), does allow loan recipients (and other beneficiaries of financial aid issued under the law) to use funds for utility bill payments.

Industry Investment Activity

The electric power sector has been undergoing a transition over the last decade or so, characterized by changing energy sources and increasing use of distributed generation. Congress has taken some action to encourage this transition, for example by establishing tax credits to encourage the use of wind and solar. The desired direction and pace of the transition remain a topic of debate.

COVID-19 [may affect the pace of the energy transition](#), potentially raising issues for Congress. In the near term, companies may not be able to complete planned construction activities in time to meet

deadlines for expiring tax credits for [wind](#), [solar](#), and [carbon capture projects](#). In the long term, economic conditions could slow investment activities in the electric power sector. Different types of utilities (e.g., publicly owned, investor owned) could face different challenges because of the different ways they plan investments and raise funds for those investments.

Following the U.S. recession in 2008-2009, Congress took a number of actions that drove investment in the electric power sector. [Examples from the American Recovery and Reinvestment Act of 2009](#) (P.L. 111-5) include grants for utility smart grid investments, increased funding for research activities sponsored by the U.S. Department of Energy, and expanded tax incentives for certain electric equipment (e.g., wind turbines, solar panels).

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